

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-34: (cancelled)

35. (currently amended) A semi-rigid viscoelastic foam made from a Part A composition and a Part B composition, said Part A composition comprising 20-50 weight percent isocyanate (NCO), said Part B composition comprising at least 40 40 parts by weight of one or a mixture of propylene oxide-extended amine-based polyether polyols being at least 3-functional and having an OH number less than or about 150 and having substantially no ethylene oxide extension units, at least 10 parts by weight of an additional polyol selected from the group consisting of non-amine filled polyether polyols and non-amine unfilled polyether polyols, and 0.01-4 parts by weight catalyst, said Part A and Part B compositions being combined to provide said viscoelastic foam, wherein all values expressed as weight percents are based on the total weight of the Part A composition, and all parts by weight are parts by weight of the Part B composition, said Part B composition having 100 parts by weight total polyols.

36. (previously presented) A viscoelastic foam according to claim 35, said additional polyol being a tri-functional polyether polyol.

37. (previously presented) A viscoelastic foam according to claim 35, having an index of 60-115.

38. (canceled)

39. (previously presented) A viscoelastic foam according to claim 35, said Part B composition further comprising about 1-3 parts by weight water.

40. (previously presented) A viscoelastic foam according to claim 35, said Part B composition further comprising about 1-6 parts by weight black paste.

41. (previously presented) A viscoelastic foam according to claim 35, said isocyanate in said Part A composition being present in the form of 4,4'-MDI.

42. (previously presented) A viscoelastic foam according to claim 41, said 4,4'-MDI being present in said Part A composition in an amount sufficient to provide an isocyanate (NCO) concentration of about 33.6 percent by weight.

43. (previously presented) A viscoelastic foam according to claim 35, said isocyanate in said Part A composition being present in the form of an allophanate-modified MDI prepolymer, said part A composition having an isocyanate (NCO) concentration of about 20-30 percent by weight.

44. (currently amended) A viscoelastic foam according to claim 35, said one or a mixture of propylene oxide-extended amine-based polyether polyols comprising monoethanolamine-based polyol in an amount of 0-10 parts by weight, triethanolamine-based polyol in an amount of 4010-70 parts by weight, and ethylenediamine based polyol in an amount of 0-36 parts by weight.

45. (previously presented) A viscoelastic foam according to claim 35, said catalyst comprising amine catalyst in an amount of 0-2.5 parts by weight, delayed action catalyst in an amount of 0-1 parts by weight, and trimerization catalyst in an amount of 0-1 parts by weight.

46. (previously presented) A viscoelastic foam according to claim 45, said amine catalyst being tertiary amine catalyst, said delayed action catalyst being a combination delayed action catalyst, said trimerization catalyst being a quaternary ammonium salt trimer catalyst.

47. (previously presented) A viscoelastic foam according to claim 35, said additional polyol being a glycerin-based polyoxypropylene-polyoxyethylene-extended polyether polyol.

48. (previously presented) A viscoelastic foam according to claim 35, said additional polyol being a polyoxypropylene-polyoxyethylene-extended polyether polyol.

49. (canceled)

50. (canceled)

51. (previously presented) A viscoelastic foam according to claim 35, said one or a mixture of propylene oxide-extended amine-based polyether polyols comprising triethanolamine-based polyol in an amount of 60 or 70 parts by weight, said additional polyol being present in an amount of 30 or 40 parts by weight.

52. (previously presented) A viscoelastic foam according to claim 51, said one or a mixture of propylene oxide-extended amine-based polyether polyols further comprising monoethanolamine-based polyol in an amount of 8-10 parts by weight.

53. (previously presented) A viscoelastic foam according to claim 51, said additional polyol being a filled polyether polyol.

54. (currently amended) A method of making a semi-rigid viscoelastic foam comprising the steps of:

a) providing a Part A composition comprising 20-50 weight percent isocyanate;

b) providing a Part B composition comprising at least 40 10 parts by weight of one or a mixture of propylene oxide-extended amine-based polyether polyols being at least 3-functional and having an OH number less than or about 150 and having substantially no ethylene oxide extension units, at least 10 parts by weight of an additional polyol selected from the group consisting of non-amine filled polyether polyols

and non-amine unfilled polyether polyols, and 0.01-4 parts by weight catalyst; and
c) combining said Part A and Part B compositions to provide said semi-rigid viscoelastic foam;
wherein all values expressed as weight percents are based on the total weight of the Part A composition, and all parts by weight are parts by weight of the Part B composition, said Part B composition having 100 parts by weight total polyols.

55. (previously presented) A method according to claim 54, said additional polyol being a tri-functional polyether polyol.

56. (previously presented) A method according to claim 54, said viscoelastic foam having an index of 60-115.

57. (previously presented) A method according to claim 54, said Part B composition further comprising about 1-3 parts by weight water.

58. (previously presented) A method according to claim 54, said Part B composition further comprising about 1-6 parts by weight black paste.

59. (previously presented) A method according to claim 54, said isocyanate in said Part A composition being present in the form of 4,4'-MDI.

60. (previously presented) A method according to claim 59, said 4,4'-MDI being present in said Part A composition an amount sufficient to provide an isocyanate (NCO) concentration of about 33.6 percent by weight in said Part A composition.

61. (previously presented) A method according to claim 54, said isocyanate in said Part A composition being present in the form of an allophanate-modified MDI prepolymer.

62. (currently amended) A method according to claim 54, said one or a mixture of

propylene oxide-extended amine-based polyether polyols comprising monoethanolamine based polyol in an amount of 0-10 parts by weight, triethanolamine based polyol in an amount of 40-10-70 parts by weight; and ethylenediamine based polyol in an amount of 0-36 parts by weight.

63. (previously presented) A viscoelastic foam according to claim 35, said one or a mixture of propylene oxide-extended amine-based polyether polyols comprising triethanolamine-based polyol in an amount of 60 or 70 parts by weight, said additional polyol being present in an amount of 30 or 40 parts by weight.

64. (previously presented) A viscoelastic foam according to claim 63, said one or a mixture of propylene oxide-extended amine-based polyether polyols further comprising monoethanolamine-based polyol in an amount of 8-10 parts by weight.

65. (previously presented) A method according to claim 63, said additional polyol being a polyoxypropylene-polyoxyethylene-extended filled polyether polyol.

66. (currently amended) A foam, said foam being a semi-rigid viscoelastic foam, wherein on impact with a flat circular impactor having a 4-inch diameter at an impact speed of ~~about~~2 meters per second, a sample of said foam measuring 5.5" x 5.5" x 1" thick exhibits about 100 g's of breakthrough acceleration, and wherein said foam sample is substantially 100% recoverable and exhibits negligible loss of strength following said 2 m/s impact.

67. (currently amended) A foam according to claim 66, wherein on impact with said flat circular impactor having a 4-inch diameter at an impact speed of ~~about~~6 meters per second, said foam sample measuring 5.5" x 5.5" x 1" thick exhibits about 150 g's of breakthrough acceleration, and wherein said foam sample is substantially 100% recoverable following said 6 m/s impact.

68. (new) A viscoelastic foam made from a Part A composition and a Part B

composition, said Part A composition comprising 20-50 weight percent isocyanate (NCO), said Part B composition comprising at least 40 parts by weight of propylene oxide-extended triethanolamine-based polyether polyol having an OH number less than or about 150 and having substantially no ethylene oxide extension units, at least 10 parts by weight of an additional polyol selected from the group consisting of non-amine filled polyether polyols and non-amine unfilled polyether polyols, and 0.01-4 parts by weight catalyst, said Part A and Part B compositions being combined to provide said viscoelastic foam, wherein all values expressed as weight percents are based on the total weight of the Part A composition, and all parts by weight are parts by weight of the Part B composition, said Part B composition having 100 parts by weight total polyols.